



Colorado Department  
of Public Health  
and Environment

**COLORADO DISCHARGE PERMIT SYSTEM (CDPS)  
FACT SHEET FOR PERMIT NUMBER CO0046566  
DEVIL'S THUMB RANCH WWTF  
GRAND COUNTY**

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**A. Permit Type:** Domestic -Minor Municipal, Mechanical Plant, Second Renewal

**B. Discharge To:** Surface Water

**II. FACILITY INFORMATION**

**A. SIC Code:** 4952 Sewerage Systems

**B. Facility Location:** 3530 County Rd 83, Tabernash, CO 80478, Latitude:

**C. Permitted Feature:** 001A, following disinfection and prior to mixing with the receiving stream. Latitude: 39° 58' 15.49" N Longitude: 105° 47' 2.80" W

The location(s) provided above will serve as the point(s) of compliance for this permit and are appropriate as they are located after all treatment and prior to discharge to the receiving water.

**D. Facility Flows:** 0.034 MGD

**E. Major Changes From Last Renewal:**

Ammonia antidegradation-based effluent limitation (ADBELs) have increased due to an increase in chronic and acute low flow. The pH monitoring frequency has reduced to 2 days/month and the monitoring frequencies for *E. coli* and TRC have reduced from monthly to quarterly.

### III. RECEIVING STREAM

**A. Waterbody Identification:** COUCUC10a, Ranch Creek

**B. Water Quality Assessment:**

An assessment of the stream standards, low flow data, and ambient stream data has been performed to determine the assimilative capacities for *Ranch Creek* for potential pollutants of concern. This information, which is contained in the Water Quality Assessment (WQA) for this receiving stream(s), also includes an antidegradation review, where appropriate. The Division's Permits Section has reviewed the assimilative capacities to determine the appropriate water quality-based effluent limitations as well as potential limits based on the antidegradation evaluation, where applicable. The limitations based on the assessment and other evaluations conducted as part of this fact sheet can be found in Part I.A of the permit.

Outfall 001A will continue to be the authorized discharge point to the receiving stream.

### IV. FACILITY DESCRIPTION

**A. Infiltration/Inflow (I/I)**

No infiltration/inflow problems have been documented in the service area.

**B. Lift Stations**

There are no lift stations in the service area.

**C. Chemical Usage**

The permittee did not specify any chemicals for use in waters that may be discharged. On this basis, no chemicals are approved under this permit. Prior to use of any applicable chemical, the permittee must submit a request for approval that includes the most current Material Safety Data Sheet (MSDS) for that chemical. Until approved, use of any chemical in waters that may be discharged could result in a discharge of pollutants not authorized under the permit. Also see Part II.A.1. of the permit.

**D. Treatment Facility, Facility Modifications and Capacities**

The facility consists of two 22,000 gallon septic tanks connected in series, two 20,000 gallon recirculation tanks connected in series, two 48' x 48' recirculation sand filters (RSF), ultraviolet disinfection lamps, and a pump to discharge treated effluent to the discharge point.

The permittee has not performed any construction at this facility that would change the hydraulic capacity of 0.034 MGD or the organic capacity of 39.22 lbs BOD<sub>5</sub>/day, which were specified in Site Approval # 4633. That document should be referred to for any additional information.

Pursuant to Section 100.5.2 of the Water and Wastewater Facility Operator Certification Requirements, this facility will require a certified operator. If the facility has a question on the level of the certified operator it needs then the facility will need to contact the Engineering Section of the Division.

## **E. Biosolids Treatment and Disposal**

Biosolids are hauled annually by a septage hauler.

### **1. EPA General Permit**

EPA Region 8 issued a General Permit (effective October 19, 2007) for Colorado facilities whose operations generate, treat, and/or use/dispose of sewage sludge by means of land application, landfill, and surface disposal under the National Pollutant Discharge Elimination System. All Colorado facilities are required to apply for and to obtain coverage under the EPA General Permit.

### **2. Biosolids Regulation (Regulation No. 64, Colorado Water Quality Control Commission)**

While the EPA is now the issuing agency for biosolids permits, Colorado facilities that land apply biosolids must comply with requirements of Regulation No. 64, such as the submission of annual reports as discussed later in this rationale.

## **V. PERFORMANCE HISTORY**

### **A. Monitoring Data**

1. Discharge Monitoring Reports – The following tables summarize the effluent data reported on the Discharge Monitoring Reports (DMRs) for the previous permit term, from November 2009 through July 2014.

**Table V-1 – Summary of DMR Data for Permitted Feature Data to be merged must be entered on this row**

Parameter	# Samples or Reporting Periods	Reported Average Concentrations Avg/Min/Max	Reported Maximum Concentrations Avg/Min/Max	AD 2-Year Average Avg/Min/Max	Previous Avg/Max/AD Permit Limit	Number of Limit Excursions
Effluent Flow (MGD)	57	0.011/0.0063/0.019	0.018/0.011/0.044		0.034/Report	
pH (su)	57	7.3/6.6/7.7	7.6/7.2/8.4		NA - 6.5-9.0	
E. coli (#/100 ml)	56	2.2/<2/195	2.2/<2/195	11/<2/14	2000/4000/456	
TRC (mg/l)	11	0/0/0	0/0/0	0/0/0	0.32/0.31/0.05	
NH3 as N, Tot (mg/l) Jan	5	6.5/0.12/24	6.5/0.12/24	2.1/1.4/3.2	Report/Report/15	
NH3 as N, Tot (mg/l) Feb	5	4.4/0.24/5.9	4.4/0.24/5.9	2.2/1.5/3.3	Report/Report/11	
NH3 as N, Tot (mg/l) Mar	5	5.5/2/9.3	5.5/2/9.3	2.3/1.4/3.5	Report/Report/11	
NH3 as N, Tot (mg/l) Apr	5	2.6/0.09/4.4	2.6/0.09/4.4	2.2/1.2/3.5	Report/Report/8	
NH3 as N, Tot (mg/l) May	5	0.81/0.09/1.7	0.81/0.09/1.7	2.2/1.1/3.5	Report/Report/15	
NH3 as N, Tot (mg/l) Jun	5	0.7/0.08/1.5	0.7/0.08/1.5	2.2/1.1/3.4	Report/Report/11	
NH3 as N, Tot (mg/l) Jul	5	1.9/0.64/3.1	1.9/0.64/3.1	2.2/1.2/3.5	Report/Report/7	
NH3 as N, Tot (mg/l) Aug	4	0.66/0.09/1.8	0.66/0.09/1.8	1.6/1.2/2	Report/Report/6	
NH3 as N, Tot (mg/l) Sep	4	0.95/0.06/2.7	0.95/0.06/2.7	1.6/1.3/2	Report/Report/8	
NH3 as N, Tot (mg/l) Oct	4	0.76/0.05/1.7	0.76/0.05/1.7	1.6/1.3/2	Report/Report/8	
NH3 as N, Tot (mg/l) Nov	5	0.43/0.05/1.7	0.43/0.05/1.7	1.6/1.3/2.1	Report/Report/13	
NH3 as N, Tot (mg/l) Dec	5	2.5/0.06/7.7	2.5/0.06/7.7	1.7/1.4/2.4	Report/Report/10	
BOD5 (mg/l)	19	3.9/1/9.3	4.9/1.4/12		30/45/	
BOD5, influent (mg/l)	19	331/220/760	421/230/800		NA/NA/	
BOD5, influent (lbs/day)	19	29/0.37/63	52/0.57/113		NA/NA/	
BOD5, effluent (mg/l)	19	3.9/1/9.3	4.9/1.4/12		NA/NA/	
BOD5 (% removal)	19	98/77/99	NA/NA/NA		NA/NA/	1
TSS (mg/l)	19	3.3/1/11	4.9/1/18		30/45/	
TSS, influent (lbs/day)	19	148/1.5/316	224/2/496		NA/NA/	
TSS, effluent (mg/l)	19	3.3/1/11	4.9/1/18		NA/NA/	
TSS (% removal)	19	97/94/99	NA/NA/NA		NA/NA/	
Oil and Grease (mg/l)	12	NA/NA/NA	0/0/0		NA/10/	
TDS PWS intake (mg/l)	19	184/110/420	177/128/208*	NA/NA/NA	Report/Report	
TDS WWTF effluent (mg/l)	38	317/109/830	NA/NA/NA	NA/NA/NA	Report/Report	

\* Daily max reporting for TDS PWS intake began December 2012

\*\* Geometric mean

NA means Not Applicable

NV means No Visible Sheen

## B. Compliance With Terms and Conditions of Previous Permit

1. Effluent Limitations – The data shown in the preceding table(s) indicates compliance with the numeric limitations of the previous permit.

For the reporting period of December 2009, there was a numeric violation of 77% BOD<sub>5</sub> removal where an 85 % BOD<sub>5</sub> removal was required. On the same DMR report, a thirty day influent BOD<sub>5</sub> average was reported at 352 mg/L and a thirty day effluent BOD average was reported at 9 mg/L. The permittee was notified of the possible incorrect BOD percent removal calculation listed on the December 2009 DMR. This seemed to be an isolated case.

In accordance with 40 CFR Part 122.41(a), any permit noncompliance constitutes a violation of the

Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

## VI. DISCUSSION OF EFFLUENT LIMITATIONS

### A. Regulatory Basis for Limitations

#### 1. Technology Based Limitations

- a. Federal Effluent Limitation Guidelines – The Federal Effluent Limitation Guidelines for domestic wastewater treatment facilities are the secondary treatment standards. These standards have been adopted into, and are applied out of, Regulation 62, the Regulations for Effluent Limitations.
- b. Regulation 62: Regulations for Effluent Limitations – These Regulations include effluent limitations that apply to all discharges of wastewater to State waters and are shown in Section VIII of the WQA. These regulations are applicable to the discharge from the Devil's Thumb Ranch WWTF.

2. Numeric Water Quality Standards - The WQA contains the evaluation of pollutants limited by water quality standards. The mass balance equation shown in Section VI of the WQA was used for most pollutants to calculate the potential water quality based effluent limitations (WQBELs),  $M_2$ , that could be discharged without causing the water quality standard to be violated. For ammonia, the AMMTOX Model was used to determine the maximum assimilative capacity of the receiving stream. A detailed discussion of the calculations for the maximum allowable concentrations for the relevant parameters of concern is provided in Section VI of the Water Quality Assessment developed for this permitting action.

The maximum allowable pollutant concentrations determined as part of these calculations represent the calculated effluent limits that would be protective of water quality. These are also known as the water quality-based effluent limits (WQBELs). Both acute and chronic WQBELs may be calculated based on acute and chronic standards, and these may be applied as daily maximum (acute) or 30-day average (chronic) limits.

3. Narrative Water Quality Standards - Section 31.11(1)(a)(iv) of The Basic Standards and Methodologies for Surface Waters (Regulation No. 31) includes the narrative standard that State surface waters shall be free of substances that are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life.
  - a. Whole Effluent Toxicity - The Water Quality Control Division has established the use of WET testing as a method for identifying and controlling toxic discharges from wastewater treatment facilities. WET testing is being utilized as a means to ensure that there are no discharges of pollutants "in amounts, concentrations or combinations which are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life" as required by Section 31.11 (1) of the Basic Standards and Methodologies for Surface Waters. The requirements for WET testing are being implemented in accordance with Division policy, Implementation of the Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (Sept 30, 2010). Note that this policy has recently been updated and the permittee should refer to this document for additional information regarding WET.

4. Water Quality Regulations, Policies, and Guidance Documents

- a. Antidegradation - Since the receiving water is Undesignated, an antidegradation review is required pursuant to Section 31.8 of The Basic Standards and Methodologies for Surface Water. As set forth in Section VII of the WQA, an antidegradation evaluation was conducted for pollutants when water quality impacts occurred and when the impacts were significant. Based on the antidegradation requirements and the reasonable potential analysis discussed below, antidegradation-based average concentrations (ADBACs) may be applied.

According to Division procedures, the facility has three options related to antidegradation-based effluent limits: (1) the facility may accept ADBACs as permit limits (see Section VII of the WQA); (2) the facility may select permit limits based on their non-impact limit (NIL), which would result in the facility not being subject to an antidegradation review and thus the antidegradation-based average concentrations would not apply (the NILs are also contained in Section VII of the WQA); or (3) the facility may complete an alternatives analysis as set forth in Section 31.8(3)(d) of the regulations which would result in alternative antidegradation-based effluent limitations.

The effluent must not cause or contribute to an exceedance of a water quality standard and therefore the WQBEL must be selected if it is lower than the NIL. Where the WQBEL is not the most restrictive, the discharger may choose between the NIL or the ADBAC: the NIL results in no increased water quality impact; the ADBAC results in an “insignificant” increase in water quality impact. The ADBAC limits are imposed as two-year average limits.

- b. Antibacksliding – As the receiving water is designated Reviewable or Outstanding, and the Division has performed an antidegradation evaluation, in accordance with the Antidegradation Guidance, the antibacksliding requirements in Regulation 61.10 have been met.
- b. Determination of Total Maximum Daily Loads (TMDLs) –. The receiving stream to which the Devil’s Thumb Ranch WWTF discharges is currently listed on the State’s 303(d) list for development of TMDLs for Temperature. However, the TMDL has not yet been finalized. Consistent with Division practice, this permit establishes monitoring requirements for these pollutants until such time as the TMDLs is complete and waste load allocations have been determined. The permit may be reopened to include limitations based upon a finalized TMDL.
- d. Colorado Mixing Zone Regulations – Pursuant to section 31.10 of The Basic Standards and Methodologies for Surface Water, a mixing zone determination is required for this permitting action. The Colorado Mixing Zone Implementation Guidance, dated April 2002, identifies the process for determining the meaningful limit on the area impacted by a discharge to surface water where standards may be exceeded (i.e., regulatory mixing zone). This guidance document provides for certain exclusions from further analysis under the regulation, based on site-specific conditions.

The guidance document provides a mandatory, stepwise decision-making process for determining if the permit limits will not be affected by this regulation. Exclusion, based on Extreme Mixing Ratios, may be granted if the ratio of the facility design flow to the chronic low flow (30E3) is greater than 2:1 or if the ratio of the chronic low flow to the design flow is greater than 20:1. Since the ratio of the chronic low flow to the design flow is 35:1 the permittee is eligible for an exclusion from further analysis under the regulation.

- f. Salinity Regulations – In compliance with the Colorado River Salinity Standards and the Colorado Discharge Permit System Regulations, the permittee shall monitor for total dissolved solids on a **Quarterly** basis. Samples shall be taken at Permitted Feature **001A**.

An evaluation of the discharge of total dissolved solids indicates that the Devil's Thumb Ranch WWTF does not exceed the threshold of 1 ton/day or 350 tons/year of salinity. To determine the TDS loading from this facility, the average reported TDS values were multiplied by the average flow, then by 8.34. The average was determined to be 0.015 tons/day. Also, the average concentration discharged is less than 500 mg/l, and therefore the facility is exempt from further requirements other than monitoring for TDS.

- g. Reasonable Potential Analysis – Using the assimilative capacities contained in the WQA, an analysis must be performed to determine whether to include the calculated assimilative capacities as WQBELs in the permit. This reasonable potential (RP) analysis is based on the Determination of the Requirement to Include Water Quality Standards-Based Limits in CDPS Permits Based on Reasonable Potential, dated December, 2002. This guidance document utilizes both quantitative and qualitative approaches to establish RP depending on the amount of available data.

A qualitative determination of RP may be made where ancillary and/or additional treatment technologies are employed to reduce the concentrations of certain pollutants. Because it may be anticipated that the limits for a parameter could not be met without treatment, and the treatment is not coincidental to the movement of water through the facility, limits may be included to assure that treatment is maintained.

A qualitative RP determination may also be made where a federal ELG exists for a parameter, and where the results of a quantitative analysis results in no RP. As the federal ELG is typically less stringent than a limitation based on the WQBELs, if the discharge was to contain concentrations at the ELG (above the WQBEL), the discharge may cause or contribute to an exceedance of a water quality standard.

To conduct a quantitative RP analysis, a minimum of 10 effluent data points from the previous 5 years, should be used. The equations set out in the guidance for normal and lognormal distribution, where applicable, are used to calculate the maximum estimated pollutant concentration (MEPC). For data sets with non-detect values, and where at least 30% of the data set was greater than the detection level, MDLWIN software is used consistent with Division guidance to generate the mean and standard deviation, which are then used to establish the multipliers used to calculate the MEPC. If the MDLWIN program cannot be used the Division's guidance prescribes the use of best professional judgment.

For some parameters, recent effluent data or an appropriate number of data points may not be available, or collected data may be in the wrong form (dissolved vs total) and therefore may not be available for use in conducting an RP analysis. Thus, consistent with Division procedures, monitoring will be required to collect samples to support a RP analysis and subsequent decisions for a numeric limit. A compliance schedule may be added to the permit to require the request of an RP analysis once the appropriate data have been collected.

For other parameters, effluent data may be available to conduct a quantitative analysis, and therefore an RP analysis will be conducted to determine if there is RP for the effluent discharge to cause or contribute to exceedances of ambient water quality standards. The guidance specifies

that if the MEPC exceeds the maximum allowable pollutant concentration (MAPC), limits must be established and where the MEPC is greater than half the MAPC (but less than the MAPC), monitoring must be established. Table VI-1 contains the calculated MEPC compared to the corresponding MAPC, and the results of the reasonable potential evaluation, for those parameters that met the data requirements. The RP determination is discussed for each parameter in the text below.

**Table VI-1 – Quantitative Reasonable Potential Analysis**

Parameter	30-Day Average			7-Day Ave or Daily Max			Antideg (2 Year Roll. Ave)		
	MEPC	WQBEL* (MAPC)	Reasonable Potential	MEPC	WQBEL* (MAPC)	Reasonable Potential	MEPC	ADBAC (MAPC)	Reasonable Potential
E. coli (#/100 ml)	215	4607	Yes (Qual)	215	9214	Yes (Qual)	15	701	Yes (Qual)
TRC (mg/l)	NA	0.41	Yes (Qual)	NA	0.49	Yes (Qual)	NA	0.063	Yes (Qual)
Total Inorganic Nitrogen (mg/l)	NA			NA	212	No (Qual)	NA	38	No (Qual)
NH3 as N, Tot (mg/l) Jan	24	100	Monitor	24	100	Monitor	3.2	16	Yes (Qual)
NH3 as N, Tot (mg/l) Feb	5.9	100	Monitor	5.9	100	Monitor	3.3	14	Yes (Qual)
NH3 as N, Tot (mg/l) Mar	9.3	100	Monitor	9.3	100	Monitor	3.5	13	Yes (Qual)
NH3 as N, Tot (mg/l) Apr	4.4	100	Monitor	4.4	100	Monitor	3.5	14	Yes (Qual)
NH3 as N, Tot (mg/l) May	1.7	100	Monitor	1.7	100	Monitor	3.5	21	Yes (Qual)
NH3 as N, Tot (mg/l) Jun	1.5	100	Monitor	1.5	100	Monitor	3.4	17	Yes (Qual)
NH3 as N, Tot (mg/l) Jul	3.1	100	Monitor	3.1	100	Monitor	3.5	15	Yes (Qual)
NH3 as N, Tot (mg/l) Aug	1.8	100	Monitor	1.8	100	Monitor	2	17	Yes (Qual)
NH3 as N, Tot (mg/l) Sep	2.7	100	Monitor	2.7	100	Monitor	2	22	Yes (Qual)
NH3 as N, Tot (mg/l) Oct	1.7	100	Monitor	1.7	100	Monitor	2	19	Yes (Qual)
NH3 as N, Tot (mg/l) Nov	1.7	100	Monitor	1.7	100	Monitor	2.1	17	Yes (Qual)
NH3 as N, Tot (mg/l) Dec	7.7	100	Monitor	7.7	100	Monitor	2.4	16	Yes (Qual)

\*Set to 100 mg/l

## B. Parameter Evaluation

**BOD<sub>5</sub>** - The BOD<sub>5</sub> concentrations in Reg 62 are the most stringent effluent limits and are therefore applied. The removal percentages for BOD<sub>5</sub> also apply based on the Regulations for Effluent Limitations. These limitations are the same as those contained in the previous permit and are imposed upon the effective date of this permit.

**Total Suspended Solids** - The TSS concentrations in Reg 62 are the most stringent effluent limits and are therefore applied. The removal percentages for TSS also apply based on the Regulations for Effluent Limitations. These limitations are the same as those contained in the previous permit and are imposed upon the effective date of this permit.

**Oil and Grease** –The oil and grease limitations from the Regulations for Effluent Limitations are applied as they are the most stringent limitations. This limitation is the same as those contained in the previous permit and is imposed upon the effective date of this permit.

**pH** - This parameter is limited by the water quality standards of 6.5-9.0 s.u., as this range is more stringent than other applicable standards. This limitation is the same as that contained in the previous permit and is imposed upon the effective date of this permit.

**E. Coli** –The calculated E. Coli WQBEL in the WQA is greater than that allowed by the Division procedure for E. coli, which specifies a maximum of 2,000 organisms per 100 ml (30-day geometric



mean) and 4,000 organisms per 100 ml (7-day geometric mean). A qualitative determination of RP has been made as the treatment facility has been designed to treat specifically for this parameter. Previous monitoring as shown in Table V-1 indicate that this limitation can be met and is therefore imposed upon the effective date of the permit.

Total Residual Chlorine (TRC) - The limitation for TRC is based upon the WQBEL and the ADBAC as described in the WQA. A qualitative determination of RP has been made as chlorine may be used in the treatment process. Previous monitoring as shown in Table V-1 indicate that this limitation can be met and is therefore imposed upon the effective date of the permit.

Total Inorganic Nitrogen - The calculated WQBEL for T.I.N. as set out in the WQA is imposed to protect downstream water supplies. A qualitative determination of RP has been made as the facility is expected to have ammonia, nitrate, and nitrite in the discharge. As the WQBEL is very high, much higher than the expected influent concentration, no monitoring requirements or limitations are needed at this time.

Ammonia - The limitation for ammonia is based upon the WQBEL and the ADBAC as described in the WQA. A qualitative determination of RP has been made as the treatment facility has been designed to treat specifically for this parameter. As the WQBELs are much higher than the expected influent concentration of a domestic treatment facility, monitoring only for the WQBELs will be required. Previous monitoring as shown in Table V-1 indicate that this limitation can be met and is therefore effective immediately.

Metal and Cyanide- Since this is a domestic minor facility, and due to the fact that industrial dischargers are not present, the effluent is not expected or known to contain metals or cyanide in amounts that would exceed the stream standards. Therefore, limitations for metals or cyanide are not required in this permit.

Temperature- Based on the information presented in the WQA, this facility is exempt from the temperature requirements based on the flow ratio of 36:1 of 7E3 annual low flow to the permitted flow which is greater than 10:1 dilution as outlined in the Division's Temperature Policy. However, the receiving water is listed in the 303(d) listed water and therefore, a monitoring will be added to the permit for data collection for future TMDL development. Time will be allowed for installation of temperature recording device.

Organics – The effluent is not expected or known to contain organic chemicals, and therefore, limitations for organic chemicals are not required in this permit.

Whole Effluent Toxicity (WET) Testing – The Devil's Thumb Ranch WWTF does not receive a significant volume of toxic or industrial wastewater, and in accordance with Section 61.8(2)(b)(i)(B) of the Colorado Discharge Permit System Regulations, the discharge does not have the reasonable potential to cause, or measurably contribute to, an excursion above any narrative standards for water quality. Therefore, WET testing is not a requirement of this permit. However, the Division reserves the right to reopen the permit to include WET testing, should facility conditions change or if new information becomes available.

The permittee should read the WET testing section of Part I of the permit carefully, as this information has been updated in accordance with the Division's updated policy, Implementation of the Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (Sept 30, 2010) . The permit outlines the test requirements and the required follow-up actions the permittee must take to resolve a toxicity incident. The permittee should also read the above mentioned policy which is available on the

Permit Section website. The permittee should be aware that some of the conditions outlined above may be subject to change if the facility experiences a change in discharge, as outlined in Part II.A.2. of the permit. Such changes shall be reported to the Division immediately.

## VII. ADDITIONAL TERMS AND CONDITIONS

### A. Monitoring

Effluent Monitoring – Effluent monitoring will be required as shown in the permit document. Refer to the permit for locations of monitoring points. Monitoring requirements have been established in accordance with the frequencies and sample types set forth in the Baseline Monitoring Frequency, Sample Type, and Reduced Monitoring Frequency Policy for Industrial and Domestic Wastewater Treatment Facilities. This policy includes the methods for reduced monitoring frequencies based upon facility compliance as well as for considerations given in exchange for instream monitoring programs initiated by the permittee.

Table VII-1 shows the results of the reduced monitoring frequency analysis for Outfall 001A, based upon compliance with the previous permit. Reduced monitoring is granted for pH, *E. coli*, TRC, BOD<sub>5</sub>, TSS and Oil and Grease for this facility. Due to the variability between monthly effluent limits for Ammonia, the monitoring requirements will remain at a monthly frequency.

**Table VII-1 – Monitoring Reduction Evaluation**

<i>Parameter</i>	<i>Proposed Permit Limit</i>	<i>Average of 30-Day (or Daily Max) Average Conc.</i>	<i>Standard Deviation</i>	<i>Long Term Characterization (LTC)</i>	<i>Reduction Potential</i>
<i>pH (su) Minimum</i>	<i>min 6.5</i>	7.2	0.14	6.92	<i>1 Step</i>
<i>pH (su) Maximum</i>	<i>max 9.0</i>	7.4	0.14	7.68	
<i>E. coli (#/100 ml)</i>	2000	1.8	35	71.8	<i>3 Levels</i>
<i>TRC (mg/l)</i>	0.4	0	0	0	<i>3 Levels</i>
<i>NH<sub>3</sub> as N, Tot (mg/l)</i>	76	3.5	5	13.5	<i>3 Levels*</i>
<i>BOD<sub>5</sub>, effluent (mg/l)</i>	30	3.9	2.5	8.9	<i>3 Levels</i>
<i>TSS, effluent (mg/l)</i>	30	3.3	2.4	8.1	<i>3 Levels</i>
<i>Oil and Grease (mg/l)</i>	10	0	0	0	<i>3 Levels</i>

\*NH<sub>3</sub> will remain at a monitoring frequency as monthly because of the variability between the monthly effluent limits.

### B. Reporting

1. Discharge Monitoring Report – The Devil’s Thumb Ranch facility must submit Discharge Monitoring Reports (DMRs) on a monthly basis to the Division. These reports should contain the required summarization of the test results for all parameters and monitoring frequencies shown in Part I.A.2 of the permit. See the permit, Part I.D for details on such submission.
2. Special Reports – Special reports are required in the event of an upset, bypass, or other noncompliance. Please refer to Part II.A. of the permit for reporting requirements. As above, submittal of these reports to the US Environmental Protection Agency Region VIII is no longer required.

### C. Signatory and Certification Requirements

Signatory and certification requirements for reports and submittals are discussed in Part I.D.8. of the

permit.

## F. Economic Reasonableness Evaluation

Section 25-8-503(8) of the revised (June 1985) Colorado Water Quality Control Act required the Division to "determine whether or not any or all of the water quality standard based effluent limitations are reasonably related to the economic, environmental, public health and energy impacts to the public and affected persons, and are in furtherance of the policies set forth in sections 25-8-192 and 25-8-104."

The Colorado Discharge Permit System Regulations, Regulation No. 61, further define this requirement under 61.11 and state: "Where economic, environmental, public health and energy impacts to the public and affected persons have been considered in the classifications and standards setting process, permits written to meet the standards may be presumed to have taken into consideration economic factors unless:

- a. A new permit is issued where the discharge was not in existence at the time of the classification and standards rulemaking, or
- b. In the case of a continuing discharge, additional information or factors have emerged that were not anticipated or considered at the time of the classification and standards rulemaking."

The evaluation for this permit shows that the Water Quality Control Commission, during their proceedings to adopt the Classifications and Numeric Standards for Upper Colorado River Basin and North Platte River (Planning Region 12), considered economic reasonableness.

Furthermore, this is not a new discharger and no new information has been presented regarding the classifications and standards. Therefore, the water quality standard-based effluent limitations of this permit are determined to be reasonably related to the economic, environmental, public health and energy impacts to the public and affected persons and are in furtherance of the policies set forth in Sections 25-8-102 and 104. If the permittee disagrees with this finding, pursuant to 61.11(b)(ii) of the Colorado Discharge Permit System Regulations, the permittee should submit all pertinent information to the Division during the public notice period.

**Natalie Plegge**  
**8/13/14**

## VIII. REFERENCES

- A. Colorado Department of Public Health and Environment, Water Quality Control Division Files, for Permit Number CO0046566.
- B. "Design Criteria Considered in the Review of Wastewater Treatment Facilities", Policy 96-1, Colorado Department of Public Health and Environment, Water Quality Control Commission, April 2007.
- C. Basic Standards and Methodologies for Surface Water, Regulation No. 31, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective January 31, 2013.
- D. Classifications and Numeric Standards for Upper Colorado River Basin and North Platte River (Planning Region 12), Regulation No. 33, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective June 30, 2014.

- E. Colorado Discharge Permit System Regulations, Regulation No. 61, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective January 30, 2012.
- F. Regulations for Effluent Limitations, Regulation No. 62, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective July 30, 2012.
- G. Pretreatment Regulations, Regulation No. 63, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective April 01, 2007.
- H. Biosolids Regulation, Regulation No. 64, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective June 30, 2014.
- I. Colorado River Salinity Standards, Regulation No. 39, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective August 30, 1997.
- J. Colorado's Section 303(d) List of Impaired Waters and Monitoring and Evaluation List, Regulation No 93, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective March 30, 2012.
- K. Antidegradation Significance Determination for New or Increased Water Quality Impacts, Procedural Guidance, Colorado Department of Public Health and Environment, Water Quality Control Division, effective December 2001.
- L. Memorandum Re: First Update to (Antidegradation) Guidance Version 1.0, Colorado Department of Public Health and Environment, Water Quality Control Division, effective April 23, 2002.
- M. Determination of the Requirement to Include Water Quality Standards-Based Limits in CDPS Permits Based on Reasonable Potential, Policy Number CW-1, Colorado Department of Public Health and Environment, Water Quality Control Division, effective November 18, 2013.
- N. The Colorado Mixing Zone Implementation Guidance, Colorado Department of Public Health and Environment, Water Quality Control Division, effective April 2002.
- O. Baseline Monitoring Frequency, Sample Type, and Reduced Monitoring Frequency Policy for Domestic and Industrial Wastewater Treatment Facilities, Water Quality Control Division Policy WQP-20, May 1, 2007.
- P. Implementing Narrative Standards in Discharge Permits for the Protection of Irrigated Crops, Water Quality Control Division Policy WQP-24, March 10, 2008.
- Q. Implementing Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (WET) Testing, Colorado Department of Public Health and Environment, Water Quality Control Division Policy Permits-1, September 30, 2010.
- R. Policy for Conducting Assessments for Implementation of Temperature Standards in Discharge Permits, Colorado Department of Public Health and Environment, Water Quality Control Division, Policy Number WQP-23, effective July 3, 2008.
- S. Permit Compliance Schedules, Colorado Department Public Health and Environment, Water Quality Control Division Policy Number CW-3, effective March 4, 2014.

- T. Procedural Regulations for Site Applications for Domestic Wastewater Treatment Works, Regulation No. 22, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective September 30, 2009.
- U. Regulation Controlling discharges to Storm Sewers, Regulation No. 65, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective May 30, 2008.
- V. Water and Wastewater Facility Operator Certification Requirements, Regulation No. 100, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective June 30, 2012.

**Natalie Plegge**  
**8/13/14**

## **IX. PUBLIC NOTICE COMMENTS**

The public notice period was from September 12, 2014 – October 14, 2014. No comments were received during the public notice period.

**Jo Anna Beck**  
**10/17/14**